

NEC4

Term Maintenance Contract

Scope S2200 Client's service specification and drawings

**Series 1100 - Kerbs, Footways, Cycleways and Paved
Areas
DN581359**

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1170AR: Kerbs, Footways, Cycleways and Paved Areas: Frost Susceptibility

1. The to the tolerances given in Table 7/1 and unless otherwise stated in **Appendix 7/1**, material shall not be frost susceptible if it is used within 450mm of the designed final surface of a footway or paved area, or 350mm if the mean annual frost index of the site is less than 50. Material shall be classified as non-frost susceptible if the mean heave is 15mm or less, when tested in accordance with BS 812: Part 124: 2009 amended as given in Sub Clauses 801.7 and 801.8..

1171AR: Kerbs, Footways, Cycleways and Paved Areas: Footway Slurry Surfacing

1. Footway Slurry Surfacing should be undertaken in accordance with Clause 918. Hand laying and brush-texturing is permitted under sub clause 918.21. Mixing of materials in small batches is covered by sub clauses 918.16.

1172AR: Kerbs, Footways, Cycleways and Paved Areas: Wheelchair Ramps

1. Ramps shall have a maximum gradient of 1 in 12 relative to the adjacent surfaces. They shall extend across the full width of the footway unless a minimum clear width of 900mm can be achieved behind the ramp. Where possible all ramps shall be positioned to avoid ironwork in the footway and/or channel.

1101SR: Kerbs, Footways, Cycleways and Paved Areas: Precast Concrete Kerbs, Channels, Edgings and Quadrants

1. Except where otherwise specified in this Clause, precast concrete kerbs, channels, edgings and quadrants shall conform to BS EN 1340 and their dimensions, type designations and performances and classes shall be as described in this Clause and **Appendix 11/1**. They shall be laid and bedded in accordance with BS 7533-6 on a mortar bed on a concrete pavement slab, a base or a C6/8 or ST1 in accordance with BS 8500-2 concrete foundations. The mortar bed may be omitted if units are bedded onto a concrete slab or foundation that is still plastic. All precast units laid on a mortar bed or bedded onto plastic concrete shall be backed with a strength class C6/8 or ST1 concrete in accordance with BS 8500-2.
2. Precast concrete kerbs, which are to be bonded to the pavement surface, shall conform to BS EN 1340. The bonding materials and methods of bonding shall be to the

manufacturer's recommendations for this specific application. Bonded kerbs shall not be less than 100 mm in width at the base, their height shall not exceed their width and they shall be bonded over their full width. Kerbs shall be precast to the dimensions described in **Appendix 11/1**. The clear distance between unsupported pavement edge and back of kerb shall be not less than 100 mm. The bending strength of units shall be established by testing in accordance with BS EN 1340 and shall not be less than class 2 in Table 3 of BS EN 1340. Units shall be installed in accordance with the manufacturer's instructions. They shall be bonded to the pavement surface with a resilient adhesive compatible with the pavement materials and be capable of withstanding a static push-off load of 10 kN/m applied parallel to the pavement surface at right angles to the kerb.

3. Joints shall be provided in kerbs, channels, edgings and backing, which are laid on or adjacent to a concrete pavement to coincide with the pavement transverse contraction, warping and expansion joints. The joints shall be the same width as the joint sealing grooves of the pavement and shall be caulked and sealed as described in Clauses 1016 and 1017. Concrete foundations to kerbs, channels and edgings laid adjacent to a concrete pavement shall be provided with joint filler board complying with Clause 1015 placed vertically through the full extent of the concrete foundation at positions coinciding with the pavement joints. At expansion joints in bridge decks, the kerb joints shall be as described in **Appendix 11/1**. Where the details of bridge expansion joints are proposed by the Contractor, such details shall include the intended treatment at kerbs and footways.
4. For curves of radius 12 m or less, kerbs of appropriate radius shall be used as per BS EN 1340. For radii of 12m to 25m, 600mm long straight kerbs may be used. However no single kerb shall be less than 450mm long.
5. The surface level of units of kerb, channel, edging and quadrant shall not deviate from the design level ± 6 mm, nor shall the longitudinal surface regularity deviate more than 3 mm in 3 m when checked with a 3 m straight edge. Horizontal alignment shall comply with Clause 702.
6. The construction principles and practices set out in sub clauses 1-5 above shall apply equally to granite and stone kerbs and setts laid in kerb lines, except that the tolerances for longitudinal and vertical accuracy shall be ± 6 mm along the top outer edge of the kerbs to allow for local irregularities in shape

1104SR: Kerbs, Footways, Cycleways and Paved Areas: Footways and Paved Areas (Precast Concrete Flags and Natural Stone Slabs)

1. Precast concrete flags shall conform to BS EN 1339. Natural stone slabs shall conform to BS EN 1341. Type designations, thicknesses and performances and classes shall be as described in **Appendix 11/1**.
2. Precast concrete flags and natural stone slabs shall be laid in accordance with BS 7533-4, to the required cross falls with a bond as described in **Appendix 11/1** and with joints at right angles to the kerb. Flags and natural stone slabs shall be bedded on a layer of mortar not less than 10 mm and not more than 40 mm thick. Where permitted in Appendix 11/1, flags and natural stone slabs 450 mm x 450 mm and smaller may be laid on a layer of sand conforming to BS EN 12620 designation 0/4 mm, 25 mm $\pm$ 5 mm thick. Joints to be filled with sand conforming to BS EN 12620 designation 0/2.
3. On circular work where the radius is 12 m or less all flags and natural stone slabs shall be radially cut on both edges to the required line.
4. The laying course shall be laid on sub-base composed of one of the materials complying with Clause 803, 804, 805, 806, 821, 822 or 823, laid and compacted to Clause 802 or 813 as appropriate and to the thickness described in **Appendix 11/1**.
5. Precast concrete slabs shall be cut by machine where it is necessary to accommodate ironwork, lamp columns and other street furniture within the footway. To avoid undue cutting, a granolithic concrete (Clause 2607) fillet, 65mm thick and not exceeding 75mm in width, may be used to fill gaps between the flags and faces of existing boundary walls or buildings.
6. The granolithic concrete shall be fully compacted and brush finished. Granolithic concrete fillets, 65mm thick and not exceeding 200mm wide, may be used around ironwork, lamp columns, etc, at the discretion of the Overseeing Organisation.
7. Where flags or slabs are used on circular work with radii of 12m or less then flags should be radially cut on both edges.
8. Where tactile paving is to be used, it shall be done so in accordance with the document "Guidance on the Use of Tactile Paving Surfaces" (Department of Transport, December 2021). As a general rule, tactile paving used at controlled crossings should be red whilst the colour at uncontrolled crossings should be buff, unless specified otherwise by the Overseeing Organisation.

1105SR: Kerbs, Footways, Cycleways and Paved Areas: Footways and Paved Areas (Flexible Surfacing)

1. Flexible surfacing and sub-base for footways and paved areas shall be constructed using the materials and layer thicknesses described in **Appendix 11/1**.

2. Bituminous mixtures used in flexible surfacing shall be made in accordance with BS EN 13108, the detailed requirements from the example specifications in BS PD6691 and Clause 901.
3. Flexible surfacing shall be laid and compacted in accordance with BS 594987. Sub-base shall be composed of an unbound mixture conforming to Clause 803, 804, 805, 806, or 807 or a cement bound granular mixture conforming to Clause 821, 822 or 823. Sub-base shall be laid and compacted to Clause 802 or 813, as appropriate.
4. The permitted tolerance for the finished surface of footway binder course layers shall be -6 mm to +0 mm and for footway surface course layers shall be - 0 to + 6 mm.
5. The sealing of joints in surfacing or edges of repairs shall be by painting of the vertical face only (in accordance with Clause 901) and shall not include overbanding or surface applied sealing unless so direct/ed by the Service Manager.